DRAFT BIOLOGICAL RESOURCES REPORT
LILAC DEL CIELO
(TM 5427, R 05-006, S 05-026, ER 05-02-013)
AFFINIS JOB NO. 1994
SAN DIEGO COUNTY, CALIFORNIA

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August, 2005
Revised January, 2006
Revised October, 2006

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SUMMARY

To be provided with final draft

A. INTRODUCTION AND SITE DESCRIPTION

A biological resources survey was conducted on an approximately 55.9-acre parcel in an unincorporated area of the County of San Diego near the community of Bonsall (Figure 1). The irregular-shaped parcel is within Sections 20 and 21 of Township 10 South, Range, 3 West, of the USGS 7.5' Bonsall Quadrangle (Figure 2). It is east of S.R. 76, south of West Lilac Road. The San Luis Rey River is north of the property, across West Lilac Road. The property is not within the current boundaries of the approved Multiple Species Conservation Program (MSCP), but is within the boundaries of the proposed North County MSCP.

The property is currently vacant. The San Luis Rey River and flood plain are north across West Lilac Road along with other vacant land. Residential development is to the south of the property.

The topography of the site slopes steeply from the off-site developed areas down to West Lilac Road. Elevations range from about 350 ft. above mean sea level (amsl) at the top of the property to about 180 feet amsl along West Lilac Road. There are three drainages which support ephemeral streams. Four soils series are mapped on-site, including Fallbrook sandy loam, 5-30% slopes, eroded; Fallbrook sandy loam, 9-30% slopes, severely eroded; Placentia sandy loam, 9-15% slopes, eroded; and Cieneba coarse sandy loam, 15-30% slopes, eroded (Bowman, 1973).

The property largely supports native vegetation, although a series of firebreaks is maintained on the site (Figure 3). The firebreaks border the residential development at the top of the property and also run along the site's boundary at West Lilac Road. Additional firebreaks run downslope at fairly regular intervals. In general, the firebreaks are 50 feet wide.

The applicant is proposing a multi-family residential project on the southern portion of the site, and 11 single-family lots along West Lilac Road.

B. METHODS AND SURVEY LIMITATIONS

The California Department of Fish and Game's Natural Diversity Database (NDDB, March 2003) Rarefind program was accessed to determine if there are any sensitive species which have been reported on site or in the vicinity.

The property was surveyed by Affinis biologists Marcia Gross and Michael Busdosh on May 12, 2003, between 10:30 a.m. and 2:00 p.m., under partly cloudy skies with temperatures in the mid to upper 70s and a light westerly breeze. At that time, habitat mapping was done and species lists were compiled. The site was also surveyed on May 28, 2003 by Claude Edwards, under clear skies with temperatures ranging from the mid 70s to upper 80s, and a light to moderate west breeze. Mr. Edwards' survey focused on compiling an avifauna list. Mr. Edwards also conducted protocol surveys for the coastal California gnatcatcher (*Polioptila californica californica*) in 2004 (see Table 1 and Appendix 5).

Figure 1. Regional Project Location

Figure 2. Project Location on USGS 7.5' Bonsall Quadrangle

Figure 3. Aerial View of Property

11 X 17 COLOR

Figure 3. Continued

Table 1. Dates, Times, and Weather Conditions During Gnatcatcher Surveys

DATE	TIME	Weather
05/20/04	09:00-01:00	Mostly cloudy, becoming clear; light to moderate west breezes, 78 - 82°
05/27/04	08:00-11:40	Clear to partly cloudy; cal to moderate northwest breezes; 68 - 87°
06/03/04	08:00-12:00	Hazy-overcast, becoming clear; calm to moderate west breezes; 68 - 85°

Due to the steep terrain and dense vegetative cover, not all of the site was traversed. Binoculars were used to help with field identifications in areas which were not accessible.

Habitats were mapped and all plant and animal species observed were recorded (Appendices 1-3). Nomenclature for plant species is according to Munz (1974), Beauchamp (1986), and Hickman (1993); animal nomenclature is according to the National Geographic Society (1983), American Ornithologists Union (DeBenedictis, 1989), Jameson and Peeters (1988), and Stebbens (1985). Plant community classification is according to Holland (1986).

C. RESULTS

The biological resources noted are shown in Figure 4.

1. Vegetation

Seven habitat types were mapped on the property. They include the following:

Coastal sage scrub (County/Holland Code 32500). Coastal sage scrub is the primary vegetation found on the steep slopes of the 55-acre parcel. Occupying approximately 25.3 acres, the habitat is dominated by coast sagebrush (*Artemisia californica*), flat-topped buckwheat (*Eriogonum fasciculatum*), deerweed (*Lotus scoparius*) and occasional lemonade berry (*Rhus integrifolia*). Scattered cactus (*Opuntia* spp.) patches are within the coastal sage scrub, particularly on the eastern portion of the site.

Disturbed coastal sage scrub (County/Holland Code 32500). An area totaling 4.8 acres was mapped as disturbed coastal sage scrub, as it had a high component of exotics such as fennel (*Foeniculum vulgare*) and shortpod mustard (*Hirschfeldia incana*).

Non-native grassland/coastal sage scrub (County/Holland Code 32500). One area (4.2 acres) was mapped as a combination of non-native grassland and coastal sage scrub, as the scrub vegetation is rather sparse and is intermixed with non-native grasses (*Avena* and *Bromus* spp.).

Figure 4. Biological Resources

11 X 17

Figure 4 Cont.

Riparian woodland (County/Holland Code 62000). A small pocket (0.30 acre) of riparian woodland is adjacent to West Lilac Road. This area may have been a part of the riparian habitat associated with the San Luis Rey River which became separated when the roadway was constructed. There are approximately five mature cottonwoods (*Populus fremontii*) and two large and two small arroyo willows (*Salix lasiolepsis*). The area is dominated by poison oak (*Toxicodendron diversilobum*) and hemlock (*Conium maculatum*). A few wild rose (*Rosa californica*) and some mulefat (*Baccharis salicifolia*) were noted, along with many weedy species such as wild radish (*Raphanus sativa*), mustard (*Brassica nigra*), and fennel (*Foeniculum vulgare*).

Non-native grassland (County/Holland Code 42200). Three patches of habitat dominated by non-native grasses occupy approximately 4.3 acres of the property (Figure 4).

Disturbed/firebreak (County/Holland Code 11300). While currently supporting non-native grasses and several wildflower species, firebreaks (covering 16.9 acres) were mapped as disturbed, because they are cleared and maintained on a regular basis. Overall, the areas were dominated by narrow-leaf filago (*Filago gallica*). Common wildflower species observed in these areas during the spring surveys included lupine (*Lupinus* sp.), canchalagua (*Centaurium venustum*), blue dicks (*Dichelostemma pulchellum*), and clarkia (*Clarkia purpurea*).

Disturbed Habitat (County/Holland Code 11300). A small area (0.3 acre) on the extreme eastern portion of the site was largely barren and was mapped as disturbed habitat.

A list of plant species observed during the surveys is attached as Appendix 1.

2. Wildlife

Forty-two species of birds were observed on the property (Appendix 2). Three raptors, red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*B. jamaicensis*), and turkey vulture (*Cathartes aura*) were noted flying over the site. A variety of species was found in the coastal sage scrub, including California quail (*Callipepla californica*), greater roadrunner (*Geococcyx californianus*), Cassin's kingbird (*Tyrannus vociferus*), Bewick's wren (*Thryomanes bewickii*), wrentit (*Chamaea fasciata*), phainopepla (*Phainopepla nitens*), spotted towhee (*Pipilo maculatus*), California towhee (*P. crissalis*), hooded oriole (*Icterus cucullatus*), lesser goldfinch (*Carduelis psaltria*), and American goldfinch (*C. tristis*). In all, four sensitive bird species were observed (see Appendix 4 and discussion below).

Four mammals and two reptile species were noted on-site. Audubon's cottontail (*Sylvilagus auduboni*) was observed in the non-native grassland and firebreak areas, as was California ground squirrel (*Spermophilus beecheyi*). Mounds of Botta's pocket gopher (*Thomomys bottae*) were common in the coastal sage scrub, non-native grassland, and firebreak areas; and long-tailed weasel (*Mustela frenata*) was seen in coastal sage scrub habitat. Other mammals such as skunk, raccoon, and small rodents may also be present, but these were not observed

due to their nocturnal habits. The side-blotched lizard (*Uta stanburiana*) and San Diego horned lizard (*Phrynosoma coronatum blainvillei*) were seen in coastal sage scrub.

3. Rare or Endangered Species

Four sensitive bird species and one sensitive reptile were observed on the site:

- Coastal cactus wren (*Campylorhynchus brunneicapillus*). A single cactus wren was noted during the 2003 surveys, in coastal sage scrub in the eastern portion of the property. On one occasion, it was seen in a patch of prickly pear cactus, and on the other in the top of a large olive tree. None of the patches of prickly pear within the coastal sage is particularly large, and it is unknown whether the bird is a resident onsite maintaining a breeding territory, or if it is a dispersing bird moving through the site. Cactus wrens have no state or federal status, but are considered to be a Species of Concern by the CDFG.

- Red-shouldered hawk (*Buteo lineatus elegans*). A red-shouldered hawk was observed flying over the property during the second field survey. This raptor nests in woodland habitats, and may nest in the riparian habitat along the San Luis Rey River to the north of the site. Red-shouldered hawks have no state or federal status, but are considered to be sensitive by the County of San Diego.

- Turkey vulture (*Cathartes aura*). A turkey vulture was observed flying over the property during the first survey. Turkey vultures are common in dry open country, in woodlands, and over farmlands. They nest in rocky outcrops with protected crevices. This species also has no state or federal status, but is considered sensitive by the County of San Diego.

- Coastal California gnatcatcher (*Polioptila californica californica*). As noted above, protocol surveys were conducted in 2004 (see Appendix 5). At least three, and possibly four gnatcatchers were recorded at two (possibly three) different locations on-site (Figure 4). A pair was found on two of the surveys (May 20 and 27) at the southwestern end of the site. A male was seen and heard on June 3 in the central portion of the property, and a possible fourth individual was heard calling.

- San Diego horned lizard (*Phrynosoma coronatum blainvillei*). This reptile is considered a Species of Concern by the CDFG, and is an MSCP Covered species. One individual was observed in the firebreak adjacent to West Lilac Road (Figure 4).

The federal-listed least Bell's vireo (*Vireo belli pusillus*) has been reported from the San Luis Rey River north of the property. No vireos were found on the subject property. The remnant riparian area is small (0.3 acre), is adjacent to a busy paved highway, and does not provide the shrubby willow understory preferred by this species.

The arroyo toad, *Bufo californicus*, has been reported along this general area of the San Luis Rey River. The toad is a federal-listed Endangered species, a MSCP Narrow Endemic species, and is considered Covered under the MSCP. The area is not designated as Critical Habitat for the arroyo toad by USFWS. Varanus Biological Services has surveyed portions of the San Luis Rey River for the arroyo toad since 1995; their observations are shown in Figure 5. Breeding sites were found on the river less than one-half mile upstream in 1995, 1996, 1997, and 1998. Breeding sites were also found downstream, within one mile of the property. A single male was also observed at the bridge, less than one-half mile downstream of the property.

Bullfrogs (*Rana catesbeiana*) were heard calling from a pond near the river, west of West Lilac Road during Affinis field work in 2003. Bullfrogs are predators on other amphibian larvae (as well as on their own), and can have a deleterious effect on arroyo toad larvae, but bullfrogs have likely been present along the San Luis Rey River for some time. Given the multiple observations upstream and downstream in the late 1990s and the habitats along the river, the area north and west of the property (between West Lilac Road and the river) will probably be considered as occupied or having a high probability of being occupied by the arroyo toad.

There is no breeding habitat for the arroyo toad on site. The only waters on site are three ephemeral streams, which do not have surface water in sufficient quantity or for a long enough duration for successful recruitment. Breeding habitat must have sufficient flowing water during acceptable temperature regimes to attract the adults to the stream, have them mate and lay eggs, the eggs develop to larvae, and the larvae grow and then metamorphose to young toads capable of living terrestrially, a duration of approximately 70 consecutive days. The USFWS has determined that the site may be used by adult toads in the non-breeding season, as it is within one-half mile of the river and has suitable foraging habitat. If used, it is not likely used as much as the off-site habitat west and north of West Lilac Road, which is closer to the breeding habitat of the river, has an easier substrate for burrowing (especially for younger animals), is not mostly steep slopes, and does not require crossing West Lilac Road.

Only one sensitive plant species has been reported from the project vicinity by the NDDB. San Diego ambrosia (*Ambrosia pumila*) has been reported from a few locations, particularly along S.R. 76 near the San Luis Rey River. San Diego ambrosia is a federal-listed Threatened species and a MSCP Narrow Endemic. It can occur in chaparral, coastal sage scrub, and valley and foothill grasslands in sandy loam or clay soils. It was not observed on the subject property, although the off-site habitat along the river north of West Lilac Road is optimal. Other sensitive plant species identified by the County as potentially occurring but not found on-site are listed in Appendix 3.

Figure 5. Previous Arroyo Toad Locations

Also reported from the vicinity is the southern rufous-crowned sparrow *(Aimophila ruficeps canescens*). This species has no state- or federal-status, and is an MSCP covered species. While suitable habitat is present on the property, the sparrow was not observed on-site during any of the field surveys.

4. Sensitive Habitat

Because the project area is not within the County's MSCP, any loss of coastal sage scrub on-site would require issuance of a Habitat Loss Permit.

There are three ephemeral streams on the site (Figures 4 and 7). The northern and central ephemeral streams drop over very steep terrain to the firebreak along West Lilac Road. The southern drainage originates with flow entering the site from off-site brow ditch, and flows over flatter terrain to the firebreak. Maintenance of the firebreak has apparently obliterated any flow marks; it is assumed any surface runoff crosses the area of the firebreak and moves to culverts under the roadway. The ephemeral streams are discussed in detail in the Jurisdictional Waters Report for this site.

The three ephemeral streams, below the ordinary high water mark, would be federal jurisdictional waters. The ephemeral streams from top-of-bank to top-of-bank plus the area of riparian vegetation on the southern ephemeral stream that derives benefit from water in the stream, would be state jurisdictional waters. These would not be jurisdictional as RPO wetlands under the County of San Diego. The areas are not non-soil, and are not undrained hydric soil; these are two of the three parameters used by RPO. The third parameter used is for areas supporting "…predominantly hydrophytes". No parts of the northern or central ephemeral stream support hydrophytes. The extreme downstream end of the southern ephemeral drainage has a small area mapped as riparian woodland. The County of San Diego has determined that this area meets the criteria for classification as a "wetland" under the Resource Protection Ordinance (RPO), and the project has incorporated a buffer to prevent impacts to this area.. The accompanying Jurisdictional Waters Report discusses this in more detail.

D. EVALUATION OF RESOURCES

The coastal sage scrub habitat is of moderately high quality, as it is well-developed and has a high species diversity. As noted above, several sensitive bird species are utilizing the site. There is some disruption in the "continuity" of the habitat due to the grid of firebreaks and adjacent residential development, and the habitat does not connect to any larger expanses of habitat to the south. Additional habitat is present is present across West Lilac Road to the northeast.

The on-site habitat supports and contributes to the long-term survival of sensitive species, and would be considered part of a regional linkage/corridor. The on-site habitat is adjacent to development to the south, and thus would be considered the "edge" of the corridor. Due to

the steep terrain, the property's separation from the San Luis Rey River by West Lilac Road, and the proximity to existing development, it does not provide an optimal local corridor for movement of large animals. It does provide a buffer between the existing development and the San Luis Rey River.

E. IMPACTS AND MITIGATION MEASURES

The proposed site plan is shown in Figure 6, and project impacts are shown in Figure 7. As detailed in Table 2, the grading associated with project construction would impact 7.01 acres of the site, and the brush management zone, varying in width from 60 to 100 feet, would impact an additional 3.47 acres for a total of 10.48 acres of impact. Impacts to coastal sage scrub (including disturbed coastal sage and mixed non-native grassland and coastal sage scrub) and non-native grassland would be significant.

As noted above, the loss of the coastal sage scrub habitat will require approval of a Habitat Loss Permit (HLP) by the County of San Diego, the California Department of Fish and Game, and the U.S. Fish and Wildlife Service. In compliance with the Natural Communities Conservation Plan (NCCP) Guidelines, the habitat has been assessed per the Evaluation Logic Flow Chart:

1. Natural Land. Is natural vegetation present? Yes.

2. Is coastal sage scrub present? Yes.

3. Large size. Is land most dense CSS in subregion? No. The CSS on the 55-acre parcel is adjacent to existing residential development to the south, is interrupted by a series of firebreaks averaging 50 feet in width, and is separated from the San Luis Rey River corridor by West Lilac Road. Larger expanses of CSS are present immediately adjacent to the San Luis Rey River farther east.

4. Proximity. Is land close to Higher Value District? Yes. While the property is separated from the river by West Lilac Road, it is in proximity to the San Luis Rey River linkage area.

5. Landscape Linkages. Is land located in corridor between Higher Value Districts? No. Land is between the San Luis Rey River linkage area and developed land.

6. Species Presence: Does land support high density of target species? Does land support significant populations of highly endemic species or rare sub-habitat types? While the property does not support high densities of target species or significant populations of endemic species, it does support California gnatcatchers, the San Diego horned lizard, and provides potential upland habitat for the arroyo toad. Thus, it would not be considered Lower Value.

Figure 6. Proposed Site Plan

11 X 17

Figure 6. Continued

Figure 7. Project Impacts

11 X 17

Figure 7. Continued

Table 2. Project Impacts and Mitigation Requirements

HABITAT TYPE	TOTAL AC ON-SITE	AC. IMPACTED BY GRADING	AC. IMPACTED BY BM ZONE	AC. TOTAL IMPACT	AC. REMAINING ON-SITE
Coastal sage scrub	25.30	0.06	1.13	1.19	24.11
Disturbed coastal sage scrub	4.80	0.00	0.90	0.90	3.90
Coastal sage/Non-native grassland	4.21	3.81	0.35	4.16	0.05
Riparian woodland	0.30	0.00	0.00	0.00	0.30
Non-native grassland	4.30	1.04	0.63	1.67	2.63
Disturbed/Firebreak	16.90	2.10	0.46	2.56	14.34
Disturbed	0.14	0.00	0.00	0.00	0.14
TOTAL	55.95	7.01	3.47	10.48	45.47

Based on the flow chart, the property would fall under "Intermediate Potential Value for Long-Term Conservation," allowing "case-by-case decisions".

Cumulative Impacts

The County of San Diego requested a cumulative analysis of this and other projects proposed in the vicinity to the San Luis Rey River wildlife linkage/corridor as well as cumulative loss of upland toad habitat. A geographic area was defined along the river following S.R. 76, extending from Gird Road to the east, southwest to the Camino Del Rey bridge. County records of active projects within this area (and extending as far south as Little Gopher Canyon Road and northeasterly to the intersection of Sage Road with S.R. 76) were searched. Records of nine approved projects were found, but no biological resource reports were required, and no other active projects are currently proposed.

As noted above, the subject property is separated from the river by West Lilac Road, and thus would have no direct impacts to the San Luis Rey River linkage/corridor. As no other projects are currently proposed within the study area, no cumulative impacts to the linkage would be anticipated.

By disturbing just over 10 acres of the property (including all grading and brush management areas), the project would result in an incremental loss to potential upland habitat for the arroyo toad. As there are no other projects in the vicinity proposing similar impacts, the cumulative effect of this project on regional upland habitat in the watershed would be minimal.

Mitigation

The project is proposing to partially mitigate the biological impacts by placing a biological conservation easement over the remaining 45.47 acres of on-site habitats. This would include 14.34 acres of disturbed/firebreak areas, some of which would no longer be cleared and allowed to return to coastal sage scrub habitat. These areas would be incorporated into the MSCP when the proposed North County MSCP is implemented.

The conservation easement would preserve 28.06 acres of coastal sage scrub habitat (including disturbed coastal sage and mixed non-native grassland/coastal sage), 2.63 acres of non-native grassland, and some of the firebreaks. The required mitigation ratio for each habitat type would be determined by County staff and the resource agencies during the review/approval process for the HLP.. If a 2:1 mitigation ratio is required for the loss of the coastal sage scrub, the project would easily provide the required 7.0 acres of mitigation on-site. Mitigation for the loss of the non-native grassland, at a 0.5:1 ratio, would also be accomplished by the preservation of 2.63 acres of non-native grassland in the easement.

F. CERTIFICATION

The following Affinis personnel participated in the preparation of this study:

Marcia Gross Director of Environmental Studies	Surveys, habitat mapping, report preparation
Mike Busdosh Biologist	Surveys, habitat mapping
Claude Edwards Biologist	Avifauna surveys

G. REFERENCES

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